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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,166	08/17/2001	Aya Jakobovits	511582006000	4666

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EXAMINER	
SAUNDERS, DAVID A	

ART UNIT	PAPER NUMBER
1644	

DATE MAILED: 01/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
932,166	JAKOBOVITS
Examiner	**Group Art Unit**
SAUNDERS	1644

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☑ Responsive to communication(s) filed on _____.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☑ Claim(s) 1, 4-18, 20, 22, 24, 27-31 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☑ Claim(s) 1, 4-18, 20, 22, 24, 27-31 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 11 9(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____.

Attachment(s)

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Reference(s) Cited, PTO-892

☐ Notice of Informal Patent Application, PTO-152

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Other _____

Office Action Summary

Amendment of 10/24/03 has been entered. Claims 1,4-18, 20, 22, 24 and 27-31are pending and are under examination. The amendment has entered no new matter.

The amendment has overcome previously stated issues as follows:

The objection to the oath/declaration.

The objection to claim 26 under 37 CFR 1.75.

The rejection of claims 19-27 under 35 USC 112, 2nd paragraph.

The following rejections of record are maintained or modified as follows:

Claims 1, 4, 6-7, 10-12, 14-15, 18, 20, 22, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jakobovits et al In view of Edleman et al (Meth Enzymol) and as necessary Edleman et al (3,843,324).

Claims are rejected for reasons of record. It is to be noted that claims 2 and 21, now incorporated into claims 1 and 20 respectively, were previously included in the rejection. Also, claims 4 and 18, from which subject matter has been incorporated into new claims 30 and 29 respectively, were previously included in the rejection.

Applicant has urged (p 8) that Edleman et al, at page 199, and applicant use the term "plucking" in different contexts, but the statement has not differentiated the contexts. The examiner considers that the term is mechanistically the same in each case. That is, the term in each case refers to applying a mechanical force to release cells bound to a solid support via ligand/receptor binding; the result is that cells become released into a surrounding medium and that a membrane fragment containing the receptor remains bound to ligand on the support. Note particularly the illustration of "mechanical cleavage" in Fig. 5 of Edleman et al ('324).

Applicant has also urged (p 9) that, when Edleman et al at refer to "isolation of cell surface markers" at page 195, the reference is referring to a method of isolating a pure population of cells from which the surface markers (receptors) could then be isolated by an unspecified method. This interpretation goes beyond the straightforward reading of the text and assumes that Edleman et al were considering further steps that are not even stated in outline. Had what applicant suggests as the correct reading of Edleman et al been what applicant had claimed, the examiner highly doubts that applicant would have concurred that Edleman et al provide a teaching applicable under 35 USC 102.

The crux of applicant's argument is that Edleman et al teach how to isolate purified cells and that Jakobovits et al teach how to isolate receptors from cells. The examiner does not concur with this argument because, as argued supra, the interpretation of Edleman et al's teachings at page 195 assumes teachings not in the text.

With respect to Jakobovits et al, applicant has firstly argued that they teach nothing but lectin/receptor interactions. This interpretation is clearly in error, since Jakobovits et al (page 1484 under "Introduction") refer generically to "receptors" and specifically for those of "hormones, toxins, antigens" in addition to those of lectins. See also last sentence at page 1489. If applicant has meant that Jakobovits et al exemplified only lectin/ligand interactions in the isolation of membrane receptors, then it is to be noted that "lectin" clearly falls within the scope of "receptor" recited in the claims. Also applicant has offered no objective reasons as to why what is taught for lectin/ligand interactions is not applicable to antigen/antibody, hormone/receptor, and toxin/receptor interactions. There is no indication that the types of physical chemical interactions involved in receptor/ligand binding are any different for

lectins/ligands, as opposed to any of the other listed receptor/ligand binding pairs. There is no indication that lectin-ligand type receptors are associated with cell membranes by physical/ chemical interactions that differ in any way from those of other membrane associated receptors.

With respect to Jakobovits et al, applicant has secondly argued that they teach nothing but isolation of receptors from non-nucleated cells (erythrocytes) and that their teaching of lymphocytes (p 189, last para.) is not enabled. Applicant has offered no objective reasons as to why what is taught for erythrocytes is not enabled for nucleated cells. There is no indication that the types of physical chemical interactions involved in receptor/ligand binding are any different for receptors on erythrocytes, as opposed to receptors of nucleated cells. There is no indication that receptors of erythrocytes associate with membranes by physical/ chemical interactions that differ in any way from those by which receptors of nucleated cells associate with membranes.

With respect to Jakobovits et al, applicant has thirdly argued that they teach nothing but isolation of receptors from surface treated cells (neuraminidase treated). This argument is unconvincing because "comprising" in claims 1 and 20 clearly opens their scope to a prior surface treatment of the cells and because applicant clearly contemplates inclusion of such a step (spec. p 8).

With respect to Jakobovits et al, applicant has fourthly argued (p 9) that they teach nothing about isolation receptors/ligand complexes from the solid support but, rather, of only the receptor component. This argument is unconvincing because, in their analysis of the m.w. of isolated components, Jakobovits et al show a 27 KD band corresponding to PNA (i.e. the ligand on the solid support). See pages 1486-1487.

Finally applicant has urged (p 10) that Edleman et al's teachings with respect to membrane damage that occurs upon plucking do not point to the instant invention involving isolation of the receptor/ligand component along with its "microenvironment." This argument is unconvincing because Edleman et al teach that the plucking process produces a "lesion" in the membrane. The term lesion implies a tear in the membrane, due to the association of some of the membrane components with the receptor on the solid phase. Again, the examiner points out that retention of membranous material is shown in Fig. 5 of Edleman et al ('324). Furthermore, the term "microenvironment" is broad and can be inclusive of only a small portion of the membrane components associated with a membrane receptor, or inclusive of no part thereof (spec. pp 4-5). It is noted that numerous of the "analyzing" methods contemplated by applicant (spec. p 13) would not require the presence of any of the associated membrane components.

Claims 8, 16, 24 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jakobovits et al in view of Edleman et al (both references thereof) as applied to claims 1, 20, and 22 above, and further in view of Chang (WO 84/03151).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jakobovits et al in view of Edleman et al (both references thereof) as applied to claim1 above, and further in view of Kupchik.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jakobovits et al in view of Edleman et al (both references thereof) as applied to claim1 above, and further in view of Seifert et al (5,721,120).

Applicant's arguments have not separately traversed rejections of dependent claims that rely upon tertiary references. These rejections are thus maintained.

Applicant's arguments filed 10/24/03 have been fully considered but they are not persuasive.

Claims 1, 4-18, 20, 22, 24, and 27-31 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4, 16-25 and 28-31 of copending Application No. 10/209,328. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims encompass common subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The double patenting rejection is maintained.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A Saunders, PhD whose telephone number is 571-272-0849. The examiner can normally be reached on Mon-Thu from 8:00 to 5:30. The examiner can also be reached on alternate Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan, can be reached at 571-272-0841.

David A Saunders

DAVID SAUNDERS
PRIMARY EXAMINER
ART UNIT ~~182~~ 1644